

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHINJI OHSHIMA and TAKASHI TERAGUCHI

Appeal No. 1998-1695
Application No. 08/421,309

ON BRIEF

Before RUGGIERO, DIXON, and GROSS, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-13,
which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to an apparatus and method for measuring rotation quantity of a spherical object. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. An apparatus for measuring rotation quantity of a spherical object, provided with a recording means photographing and recording a rotating spherical object from one definite direction as a plurality of stationary circular images, an instrumentation means measuring positions of definite two points in each of the plurality of stationary circular images recorded by said recording means, and an arithmetic unit calculating rotation quantity of the spherical object on each axis of a three-dimensional coordinate-system on the basis of the positions of the definite two points in each of the stationary circular images.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Kobayashi et al. (Kobayashi)	4,987,299	Jan. 22, 1991
Nishiyama et al. (Nishiyama)	5,568,250	Oct. 22, 1996
		(filed May 26, 1994)

Claims 1-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nishiyama in view of Kobayashi.¹

¹ The examiner does not state the section of Title 35 upon which the claims are rejected, but references paper number 9 which sets forth 35 U.S.C. § 103(a) as the basis of the rejection.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejection, we make reference to the examiner's answer (Paper No. 17, mailed Feb. 3, 1998) for the examiner's reasoning in support of the rejection, and to appellants' brief (Paper No. 15, filed Dec. 12, 1997) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). We find that the examiner has not provided a teaching or convincing line of reasoning why one skilled in the art would have desired to modify the teachings of Nishiyama with those of Kobayashi to achieve the invention as recited in claim 1. Moreover, we agree with appellants that even if combined, the combination would not teach the invention as recited in claim 1. Specifically, claim 1 requires "an arithmetic unit calculating rotation quantity of the spherical object on each axis

of a three-dimensional coordinate-system on the basis of the positions of the definite two points in each of the stationary circular images.” Appellants argue that neither reference teaches or suggests the measurement and use of definite two points in both images to calculate the rotation quantity of the spherical object. (See brief at page 6.) We agree with appellants. The examiner maintains that Nishiyama measures various points to find the center of the object and these points can be used to determine the rotation. (See answer at page 4.) We disagree with the examiner. Nishiyama teaches only the determination of velocity and does not teach or suggest determination of rotation. The examiner relies upon Kobayashi to teach determination of rotation. Kobayashi teaches the determination of rotation by a different method than appellants, as admitted by the examiner at page 5 of the answer, but the examiner maintains that it would have been conventional and a routine design choice to measure rotation of a flying object. The examiner maintains that “a person with a little knowledge of geometry and physics can easily obtain the rotational quantity.” (See answer at pages 4-5.) Here, we disagree with the examiner and find that the examiner has not provided support for his position on the obviousness of the claimed invention. While, we agree with the examiner that basic geometry and physics would have been known to the skilled artisan, the examiner has not provided a convincing line of reasoning why it would have been obvious to one of ordinary skill in the art at the time of the invention to desire the rotation quantity of a spherical object and to calculate it based

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upon two definite points rather than using diffraction of reflected light as taught by Kobayashi. Therefore, we agree with appellants that the examiner has not set forth a ***prima facie*** case of obviousness with respect to claim 1. Similarly, claims 2, 10, and 11 contain similar limitations, and we cannot sustain the rejection of these claims, nor the rejection of dependent claims 3-9, 12, and 13.

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CONCLUSION

To summarize, the decision of the examiner to reject claims 1-13 under 35 U.S.C. § 103 is reversed.

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REVERSED

JOSEPH F. RUGGIERO
Administrative Patent Judge

JOSEPH L. DIXON
Administrative Patent Judge

ANITA PELLMAN GROSS
Administrative Patent Judge

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